XP ARTIST SERIES

LOUDSPEAKER SYSTEMS

110XP 112XP 115XP

110XP, 112XP, 115XP

INSTRUCTION MANUAL

FENDER P.A.

BUILT FROM THE SOUND UP™

Fender® XP Loudspeaker Systems

The Fender® 110XP, 112XP, and 115XP two-way, professional quality loudspeaker systems are designed to form the basis of everything from a public address system permanently installed, to the nightly rigors of a working band's portable sound system. Add ultra-deep bass to the your XP Series Loudspeaker System with a Fender 115sA or 118sA Subwoofer Loudspeaker System.

Features of XP Artist Series Loudspeakers:

- Great fidelity using a trapezoidal cabinet design
- Moisture sealed 5/8" particle board cabinet
- Pole-mount sockets
- Two high-current, 1/4" phone jacks to enable "daisy-chain" cabinet linking
- Dual piezoelectric compression drivers
- Silver grill cloth
- Metal corner protectors and glide feet
- Genuine Tolex® cabinet covering
- Compact and portable

- CAUTION: Speakers produce magnetic fields which may interfere with the operation of near-by electronic devices such as televisions and computers. Increase the distance between speakers and electronic devices to reduce interference.
- WARNING: Fender loudspeaker systems are capable of producing very high sound pressure levels which may cause temporary or permanent hearing damage. Use care when setting and adjusting volume levels during use..
- No user serviceable part inside, refer servicing to qualified personnel only.

Speaker Connections

Each XP Series Loudspeaker cabinet is equipped with two 1/4" jacks. These standard phone jacks are wired in parallel, allowing either one to be used as the input; the other jack can then be used as output to an additional speaker cabinet in a "daisy-chain" connection scheme. Fig. A illustrates the XP system "daisy-chained" with Fender 115sA or 118sA Sub-woofers.

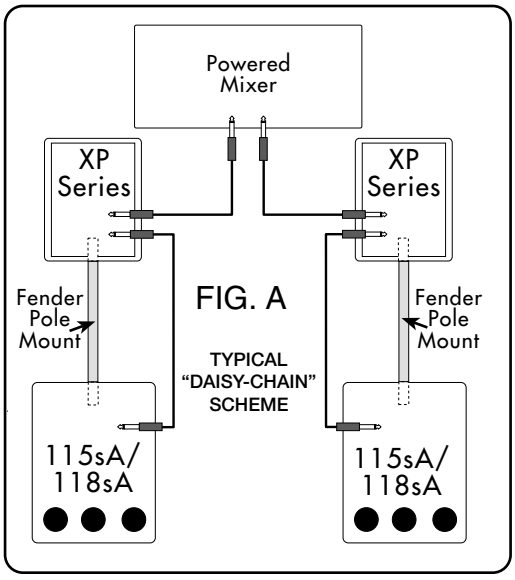


FIG. A

TYPICAL "DAISY-CHAIN" SCHEME

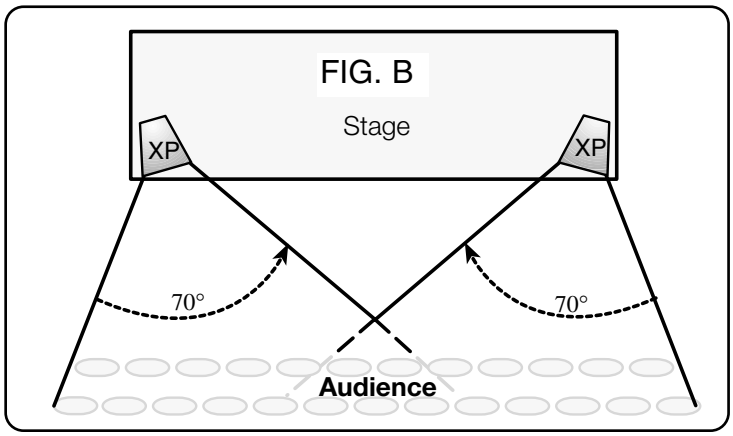
Avoid damage to your equipment by ensuring that the total speaker impedance load is within the limits set by the amplifier's manufacturer. XP Series Speakers have an impedance of 8Ω. Listed below are the combined impedance loads of the XP Series loudspeaker connected in parallel with speakers of 4Ω, 8Ω and 16Ω ratings:

- XP Series 8Ω + any **4**Ω speaker = **2.6**Ω load total
- XP Series 8Ω + any **8**Ω speaker = **4**Ω load total
- XP Series 8Ω + any **16**Ω speaker = **5.3**Ω load total

Using the recommended speaker impedance load ensures optimum efficiency and signal response. The total impedance load of a "daisy-chain" scheme can be adjusted by using speakers of different impedances. One of the results of mixing speaker impedances though, is that any speakers with lower impedance ratings will have a higher power consumption and output. For example, the power use/output of a 2Ω speaker will be twice that of a 4Ω speaker and 4 times that of a 8Ω speaker. Consider this when positioning speakers linked in a "daisy-chain."

Acoustics and Cabinet Placement

There are several things to consider when placing loudspeaker cabinets. First determine the horizontal coverage requirements for the room. When used in a typical auditorium setting, position the speakers as shown in Fig. B. Ensure adequate sound levels reach each seat in the audience by walking through the entire auditorium—listen for any gaps in coverage then reposition speakers as necessary. Recheck sound coverage with a full audience in attendance, if possible.

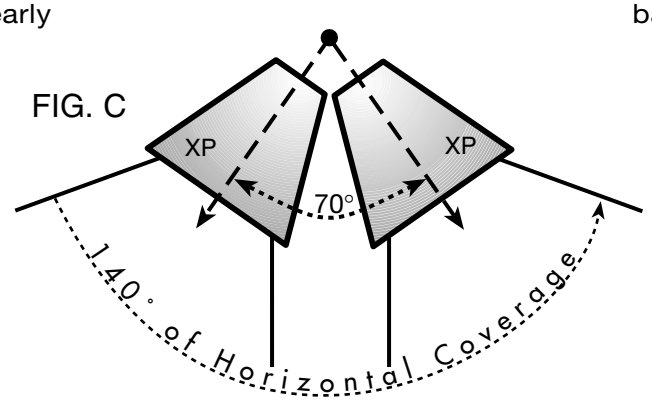


Other considerations include bass frequency performance and feedback... When a XP speaker is placed near a wall, there will a low-frequency boost of up to 3dB. The drawback is that close proximity to a wall may also cause feedback.

<u>To avoid feedback</u>: Increase the distance between speakers and the feedback source whether it is a wall, a microphone, or a guitar. Use cardioid–pattern microphones to help block feedback. Always keep microphones pointed away from speakers.

Sound quality is often compromised when a sound system is required to be hidden from sight. Remember that the location of your loudspeaker cabinets will affect sound quality and coverage area more than any other factor.

The XP Series horn has a horizontal coverage angle of 70º and a vertical coverage of 35º; bass speakers are nearly omnidirectional. When setting up your XP Series enclosures as a "single unit," aim the cabinets 70° apart as shown in FIG. C, for 140° of horizontal coverage.



Speaker Cables

Power and audio signal cables are a common sources of sound system failure. Quality cables, carefully maintained, are essential to the reliability of the entire sound system. Long cable connections or cables supplying multiple speaker cabinets must be of a sufficient gauge to transfer all of the available amplifier power to the speakers. As a rule, thicker cables (lower gauge numbers) are more efficient because they absorb less power themselves.

Prevent power loss and the degradation of signal quality by using the recommended cable gauges below.

Cable that suppplys **one** cabinet, such as the cable to the last cabinet in a "daisy-chain":

- Up to **50-feet** requires **18-gauge** cable
- Up to **100-feet** requires **16-gauge** cable

Cable that suppplys **two** cabinets, such as the cable from the amp to the first cabinet in a "daisy-chain":

- Up to **25-feet** requires **18-gauge** cable
- Up to **50-feet** requires **16-gauge** cable
- Up to **100-feet** requires **14-gauge** cable

XP Series Specifications

		110XP	112XP	115XP
MODEL:		110XP	112XP	115XP
PART NUMBER:		071-1100-400	071-1200-400	071-1500-400
MAXIMUM OUTPUT: (at 1 Meter)		117dB Continuous 123dB Peak	118dB Continuous 124dB Peak	120 dB Continuous 126dB Peak
CABINET:		5/8" (1.6 cm) Particle Board	5/8" (1.6 cm) Particle Board	5/8" (1.6 cm) Particle Board
CONNECTIONS:		(2) 1/4" Phone Jacks	(2) 1/4" Phone Jacks	(2) 1/4" Phone Jacks
DRIVER:	Low Frequency:	10" (25.4 cm) woofer 2" (5.1 cm) voice coil	12" (30.5 cm) woofer 2" (5.1 cm) voice coil	15" (38.1 cm) woofer 2.5" (6.4 cm) voice coil
	High Frequency:	Dual Piezoelectric Compression Drivers 1 1/2" (3.8 cm) diaphragms	Dual Piezoelectric Compression Drivers 1 1/2" (3.8 cm) diaphragms	Dual Piezoelectric Compression Drivers 1 1/2" (3.8 cm) diaphragms
FREQUENCY RESPONSE:		65 Hz to 20kHz	60 Hz to 20kHz	60 Hz to 20kHz
SENSITIVITY:	1W/1m:	97 dB	98 dB	98 dB
POWER HANDLING:		100W (RS-426A) 200W (Program) 400W (Peak)	100W (RS-426A) 200W (Program) 400W (Peak)	150W (RS-426A) 300W (Program) 600W (Peak)
IMPEDANCE:		8Ω	8Ω	8Ω
DIMENSIONS:	Height	20.3" (51.6 cm)	21.3" (54.1 cm)	23.9"(60.7 cm)
	Width (front)	14.6" (37.1 cm)	18" (45.7 cm)	21" (53.3 cm)
	Width (rear)	6.4" (16.3 cm)	6.4" (16.3 cm)	8.4" (21.3 cm)
	Depth	15.6" (39.6 cm)	18.4" (46.7 cm)	19.6" (49.8 cm)
WEIGHT:		37 lbs. (16.8 kg)	50 lbs. (22.7 kg)	58 lbs. (26.4 kg)

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